CONGESTION ADN THRU-PUT
VISIBILITY ADN ISOLATION

Abstract of the Invention

Offering vertical services to subscribers and service providers is an avenue to immediately improve the competitiveness of digital subscriber line access service, for example of the type offered by a local exchange carrier. To deliver high-quality vertical services, however, the underlying ADSL Data Network (ADN) or the like needs to establish Quality of Service (QoS) as a core characteristic and offer an efficient mechanism for insertion of the vertical services. The inventive network architecture introduces QoS into the ADN, in a manner that enables the delivery of sophisticated and demanding IP-based services to subscribers, does not affect existing Internet tiers of service, and is cost-effective in terms of initial costs, build-out, and ongoing operations. The architecture utilizes a switch capable of examining and selectively forwarding packets or frames based on higher layer information in the protocol stack, that is to say on information that is encapsulated in the layer-2 information utilized to define normal connectivity through the network. The switch enables segregation of upstream traffic by type and downstream aggregation of Internet traffic together with traffic from a local services domain for vertical services and other local services. Systems coupled to the local services domain alone or in combination with software in servers and/or a user's computer enable a testing of connectivity, throughput, QoS metrics and the like through selected points of the ADN network.